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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,399	07/01/2005	Sang-Hyeon Kim	P2947US00	6318

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EXAMINER	
SCOTT, RANDY A	

ART UNIT	PAPER NUMBER
2453	

NOTIFICATION DATE	DELIVERY MODE
04/28/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATENT@PARK-LAW.COM

Office Action Summary	Application No.	Applicant(s)	
	10/541,399	KIM, SANG-HYEON	
	Examiner	Art Unit	
	RANDY SCOTT	2453	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,8-15,39,41,43-45 and 47-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,8-15,39,41,43-45 and 47-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the communication filed 2/14/2011

Claim Status

2. Claims 2, 33-38, and 40 have been canceled, claims 1, 3-4, 8-15, 39, 41, 43-45, and 47-53 have currently been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4, 8, 39, 41, and 49 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645).

Regarding claims 1 and 39, Carmel et al disclose:

Establishing connections between a user client and a plurality of nodes (see fig. 4); dividing streaming data into a plurality of blocks for sequential download (see fig. 3a and col. 3,

lines 30-32, "sequence of slices"), the blocks including first and second blocks (see col. 3, lines 3-7, "sequence of segments");

dividing the first block into a plurality of sub blocks (see col. 2, lines 22-28, "series of packets");

monitoring the downloading of the sub blocks from the nodes to the user client through the established connections (see col. 2, lines 50-55, "monitoring the uploading and downloading");

wherein the sending, the monitoring and reassigning are repeated for downloading sub blocks included in the second block, when downloading of the first block is completed (see fig. 8 and col. 12, lines 40-45, which discloses the continual allocation of stream slices to the link that first completed transmission of the file it was processing).

However, Carmel et al does not specifically teach reassigning only un-downloaded ones of sub blocks, based on the monitoring, from a first one of the nodes to a second one of the nodes, if the first node is determined to have a bad connection, and if the second node finishes downloading before the first node.

Chang et al provide the specified deficiencies (see col. 8, lines 5-13, which discloses transmitting a download, beginning at the byte where the download received an error on a previous server before the download was complete, to a second server).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al with the concept illustrated by Chang et al in order to efficiently reallocate data stream portions to other terminals tat are able to act as servers upon a faulty connection with the motivation of providing the benefit of improving upon teaching transmitting sub stream data evenly by implementing a mechanism for redistribution to nodes that are currently not transmitting data.

Regarding claims 4 and 41, Carmel et al disclose:

Wherein the sub blocks are assigned to the nodes based on a round-trip time with each of the nodes, an average download speed from each of the nodes, or a combination thereof (see col. 13, lines 16-19, which discloses calculating compression ratios and slice duration).

Regarding claims 8 and 49, Carmel et al disclose:

Determining redistribution of said sub blocks from the first node to the second node based on the download rate and a number of remaining sub blocks of the first node (see col. 3, lines 1-5, "transfer rate").

4. Claims 3 and 47 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645), further in view of Moriai (US 2002/0035692).

Regarding claims 3 and 47, Carmel et al and Chang et al fail to disclose:

Wherein the monitoring of the downloading comprises determining which of the nodes are finished downloading and wherein the monitoring of the downloading comprises monitoring the completion of downloading for each of the nodes.

Moriai teaches the specified deficiencies (see sec [0165], which discloses determining whether or not a download has completed).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the concept illustrated by Moriai in order to sufficiently analyze for

transmission status of processing nodes with the motivation of providing the benefit of improving upon teaching data rate monitoring of media stream segments by implementing monitoring of each processing node job status.

5. Claims 14, 48, and 52 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645), further in view of Horvitz (US 2003/0154282).

Regarding claims 14 and 52, Carmel et al and Chang et al fail to disclose sending a request to download the reassigned sub blocks.

Horvitz teaches the specified deficiencies (see sec [0237], lines 2-5, which discloses a download re-distribution decision function).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the concept illustrated by Horvitz in order to successfully determine download redistribution among resource servers with the motivation of providing the benefit of improving upon teaching resource allocation by determining distribution frequency.

Regarding claim 48, Carmel et al and Chang et al fail to disclose wherein the first node has the lowest download rate among the nodes.

Horvitz teaches the specified deficiencies (see sec [0193], lines 16-19, "slowest storage facility").

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the concept illustrated by Horvitz in order to successfully determine download redistribution rates among resource servers with the motivation previously addressed.

6. Claims 9 and 50 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645), further in view of Vigue et al (US 7,181,506).

Regarding claims 9 and 50, Carmel et al and Chang et al do not specifically teach the storing information of nodes with which the connection establishment failed in a black list queue.

Vigue et al provides the specified deficiencies (see col. 2, lines 40-44).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the concepts of storing information of nodes with which the connection establishment failed in a black list queue with the motivation of providing the benefit of teaching an improvement upon content distribution upon peer nodes by determining which node is regulated to pass multicast data.

7. Claims 15 and 53 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645), further in view of Garcia-Luna-Aceves et al (US 2002/0004846).

Regarding claims 15 and 53, Carmel et al and Chang et al do not specifically teach downloading streaming data by connecting to a singular server if the sub-block downloading fails.

Garcia-Luna-Aceves et al provide the specified deficiencies (see fig. 5 & sec [0099], lines 16-22).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the general concepts illustrated by Garcia-Luna-Aceves et al in order to sufficiently implement a image transmission system for streaming info with the motivation of providing the benefit of teaching the maximization of issuing casted content to nodes in a network by reassigning server upon failure.

8. Claims 10-12 and 43-45 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645), further in view of Taniguchi et al (US 6,445,679).

With respect to claims 10 and 43, Carmel et al and Chang et al do not specifically teach the steps of wherein the sub blocks is determined using the node state information.

Taniguchi et al discloses the general concept of: wherein the sub blocks to be downloaded from each of the nodes are determined using the node state information (see col. 38, lines 56-64).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the general concept illustrated by Taniguchi et al with the motivation of

providing the benefit of teaching an improvement upon transmitting data blocks amongst nodes by using threshold data.

With respect to claims 11 and 44, Carmel et al and Chang et al do not specifically teach wherein sub blocks to be downloaded from each of the nodes are assigned according to state information of the nodes in an initial state of download, after a determination of download speed from each of the nodes, by using a connection state valuation index that is calculated using a round-trip time with each of the nodes, an average download speed from each of the nodes, or a combination thereof.

Taniguchi et al discloses the general concepts of: wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download (see col. 3, lines 29-33), after determination of download speed from each of the nodes, sub blocks to be downloaded from each of the nodes are determined using connection state valuation index which is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes (see col. 2, lines 44-48, which discloses transmission rate calculation).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the concept illustrated by Taniguchi et al with the motivation previously addressed.

With respect to claims 12 and 45, Carmel et al and Chang et al do not specifically teach wherein the connection establishment with the plurality of nodes is performed using state information of the nodes in step of establishing connections.

Taniguchi et al discloses the general concepts of: wherein the connection establishment with the nodes is performed using state information of the nodes (see col. 9, lines 18-25).

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the general concept illustrated by Taniguchi et al with the motivation previously addressed.

9. Claims 13 and 51 are rejected under 35 USC 103 (a) as being unpatentable over Carmel et al (US 6,389,473) in view of Chang et al (US 7,272,645), further in view Liva et al (US 2002/0136203).

With respect to claims 13 and 51, Carmel et al and Chang et al do not specifically teach determining a downloading error using a checksum value of the downloaded sub blocks.

Liva et al discloses the specified deficiencies (see sec [0087], lines 5-7, "sub-block" & "checksum").

It would have been obvious to one of ordinary skill in the art to combine Carmel et al and Chang et al with the general concept illustrated by Liva et al in order to successfully control packet transmission in a network with the motivation of providing the benefit of improving upon sub block redistribution by implementing a check sum for downloaded or streaming content to determine source reliability.

8. ***Response to Arguments***

9. Applicant's arguments filed on 2/14/11 have been fully considered and are moot in view of new grounds of rejection.

A. In response to the applicant's argument that Carmel et al fail to teach or suggest sending a request to the nodes, to download assigned ones of the sub blocks; or re-assigning only un-downloaded sub-blocks in the event of a bad connection; or reassigning un-downloaded sub blocks to a second node, if a second node finishes downloading before a first node:

The applicant's argument has been taken into consideration; however, prior art reference Chang et al (US 7,272,645) has been cited, which disclose the specified deficiencies in light of the amended claim language (see Chang et al, col. 8, lines 5-13, which discloses transmitting a download, beginning at the byte where the download received an error on a previous server before the download was complete, to a second server).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new grounds of rejection presented in this Office

action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy A. Scott whose telephone number is (571) 272-3797. The examiner can normally be reached on Monday-Thursday 7:30 am-5:00 pm, second Fridays 7:30 am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Krista Zele can be reached on (571) 272-7288. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RANDY SCOTT/

Examiner, Art Unit 2453

20110415

/Krista M. Zele/
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